

I-90 Tunnels Fire and Life Safety Documentation

The Documents Listed below are located in a folder on the WSDOT FTP site. The location of the folder is: ftp://ftp.wsdot.wa.gov/incoming/I-90_Tunnels_Fire_&_Life_Safety

Document	File Name	Prepared By	Date	Notes
Mechanical Systems Working Paper	MechWorkingPaper.pdf	HNTB	Apr-03	
FLAMMABLE LIQUID CARGO RISK ANALYSIS	I90 TWT Flammable Liquid Analysis App	WSDOT	May-04	
I-90 Two-Way Transit and Hov Operations King County, Washington Final Environmental impact Statement	ST-EIS Volume 1.pdf	ST	May-04	
I-90 Two-Way Transit and HOV Operations Project Record of Decision	9-2804 ROD Final.pdf		Sep-04	
TUNNEL FIRE AND LIFE-SAFETY SYSTEMS BACKGROUND INFORMATION & ANALYSIS APPROACH	TFLSaprchV3b.pdf	HNTB	5/20/2005	
WORK ELEMENT 21.9 TUNNEL FIRE AND LIFE-SAFETY SYSTEMS PERFORMANCE BASED ENGINEETING ANALYSIS APPROACH	I-90_FHWA_Smry1d.pdf	HNTB	Oct-05	
I-90 Two-Way Transit and HOV Operations Tunnel Fire & Life Safety Systems Fire Load and Scenarios	Fire_Load_a3.pdf	HNTB	11/1/2006	This file is a pdf of a powerpoint presentation that gave and overview of the fire size, fire curves, suppression system, ventilations and dection system.
Fire Protection Performance Design Criteria	Fire Des Crit_Draft.pdf	HNTB	11/28/2006	
Fire Scenario Discussion	Fire Scenario_Draft.pdf	HNTB	12/8/2006	
Fire Suppresion System Impacts on Fire Senario	Suppression_Draft.pdf	HNTB	12/13/2006	
SIMULATION OF EVACUATION OF MOUNT BAKER RIDGE AND FIRST HILL TUNNELS	I90_TunnelEgress_v1b.pdf	Chilworth Pacific Fire Lab	6/21/2007	
Annex	I90_TunnelEgressApend_v1b.pdf	Chilworth Pacific Fire Lab	6/21/2007	This file is the appendices for the "SIMULATION OF EVACUATION OF MOUNT BAKER RIDGE AND FIRST HILL TUNNELS" report
I-90 TUNNELS FIRE AND LIFE SAFETY SYSTEMS STUDY WORK ELEMENT 21.9.3 FIRE SCENARIO & SYSTEM CONFIGURATION FOR PERFORMANCE BASED ENGINEERING ANALYSIS WORKING PAPER	I90_FireLoadReport_c1.pdf	HNTB	Jun-08	Fire Scenario & System Configuration Working Paper (final)
TUNNEL EMERGENCY INGRESS & EGRESS EVALUATION	IngressEgressV1b.pdf	HNTB & Chilworth Pacific Fire Lab	Jun-08	
TUNNEL EMERGENCY INGRESS & EGRESS EVALUATION APPENDICES C & D	IEAppCD.pdf	HNTB & Chilworth Pacific Fire Lab	Jun-08	Appendices for the "TUNNEL EMERGENCY INGRESS & EGRESS EVALUATION"
I-90 Tunnels Fire and Life Safety Brainstorm Highway & LRT Maintenance and Operation design concerns (WSDOT Maintenance, WSDOT Design, HNTB)	FLS tunnel concerns.doc	WSDOT, HNTB	2/6/2009	This file is list of Operations and Maintenance design conderations for the I-90 Tunnels that would need to be looked into and taken into account during the design of the corridor. Operations and
I-90 CI-90 Corridor Brainstorm Highway & LRT Operations and Maintenance Design Considerations (WSDOT Maintenance, WSDOT Design, HNTB)	FLS Project Corridor Concerns.doc	WSDOT, HNTB	2/12/2009	This file is list of Operations and Maintenance design conderations for the I-90 corridor that would need to be looked into and taken into account during the design of the corridor. Operations and
TUNNEL LIGHTING SYSTEMS TS&L REPORT	I90_TunnelLightingTSL_v3a.pdf	HNTB	May-09	

I-90 TUNNELS FIRE AND LIFE SFETY SYSTEM STUDY WORK ELEMENT 21.9.4 COMPUTATIONAL FLUID DYNAMIC (CFD) SIMULATION WORKING PAPER	I90_EBFirstHill_CFD_2b.pdf	HTNB	Jun-09	
Tunnel Emergency Ingress Evaluation Commet Responses	I90_TunnelSys_JacobsCommentRespons	Jacobs	Jun-09	
Tech Memo I-90 Tunnels Fire and Life Safety Study Work Element 4.2 - Tunnel Illumination Test Section	TestTechMemoV1f.pdf	HNTB	8/11/2009	
REFINEMENT OF TUNNEL FIRE SAFETY SYSTEMS PERFORMANCE-BASED-ENGINEERIGN ANALYSIS MERCER ISLAND FIRST HILL LID EASTBOUND ROADWAY	I90_FirstHillCFD_v1b.pdf	HNTB	9/11/2009	
Tech Memo Work Element 3.1 - Performance-Based-Engineering Analysis I-90 First Hill Lid (Mercer Island Tunnel) Eastbound Outer Roadway CFD Simulation Results	I90_FirstHillCFD_TechMemoAppend_v2	HNTB	10/21/2009	
Draft Technical Memorandum	I90_MtBakerEB_CFD_TechMemo_v1d.p	HNTB	12/7/2009	Work Element 3.2 - Preformance-Based-Engineering Analysis Mt. Baker Ridge Eastbound Tunnel CFD Simulation Results
IN-DEPTH MECHANICAL INSPECTIONS MARTIN L KING LID 90/22 LID AND MOUNT BAKER RIDGE TUNNEL 90/24S AND 90/24N	I-90 Mt Baker Ridge Tunnels, 2010 mechanical inspection.pdf	Parsons Brinckerhoff	Apr-10	
IN-DEPTH ELECTRICAL INSPECTION MARTIN L KING LID 90/22 LID AND MOUNT BAKER RIDGE TUNNEL 90/24S AND 90/24N	I-90, Mt Baker Ridge Tunnels, 2010 electrical inspection.pdf	Parsons Brinckerhoff	Apr-10	
I-90 STAGE 3 PRELIMINARY ENGINEERING WORK ELEMENT 5.1 TUNNEL ITS TS&L REPORT	ITStslFinal.pdf	HNTB	5/11/2010	
I-90 TUNNEL FIRE & LIFE SAFETY SYSTEMS WORKING PAPER WORK ELEMENT 3.3	I-90_CFD_WorkingPaper_rev2h.pdf	HNTB	6/9/2010	
I-90 STAGE 3 PRELIMINARY ENGINEERING WORK ELEMENT 3.5 TYPE, SIZE, AND LOCATION REPORT FOR MODIFICATIONS TO I-90 TUNNEL SYSTEMS	I90_TunnelSysTSL_v2d.pdf	HNTB	6/30/2010	
Tunnel ITS - Power Requirements	Power20101022	HNTB	10/21/2010	This file is a 30% design level summary of the power requirement for the ITS equipement
ITS 30% DESIGN LEVEL PLANS	44364_30%ITS_Draft.pdf	HNTB	11/1/2010	
ITS 30% DESIGN	Devices20101101.pdf	HNTB	11/1/2010	This file is a list of the locations of equipment for the 30% ITS design
I-90 STAGE 3 PRELIMINARY ENGINEERING WORK ELEMENT 5.1 DRAFT TUNNEL ITS DESIGN SUMMARY	ITSDesignSumV1g.pdf	HNTB	11/1/2010	This file is a summary of the 30% ITS Design
Preliminary VE Study Report	1458-7 I-90 Two-Way Transit HOV Stage 3-PRELIM.pdf	Value Management Strategies, Inc.	Nov-10	
I-90 STAG 3 PRELIMINARY ENGINEERING WORK ELEMENT 4.1 TUNNEL ILLUMINATION DESIGN SUMMARY	I-90_Stg3_30IlluminationDesign Summa	HNTB	11/11/2010	
I-90 STAGE 3 PRELIMINARY ENGINEERING TUNNEL ILLUMINATION COST ESTIMATE	44364_I-90_30%_CostEst_V2.pdf	HNTB	11/11/2010	
DRAFT CEVP® REPORT	DRAFT I-90 Two-Way Transit & HOV CEVP Report 2010.doc		12/12/2010	

I-90 Two-Way HOV & Transit Project (Stage 3) Post-Mitigation Updates Draft November 20, 2010	I-90 Two-Way Transit & HOV Post-Mitigation Updates.docx		12/20/2010					
Tunnel lighting TS&L Report - Review Comments	I90_TSL_SS_CommentResponses1e.pdf							
DESIGN DEVIATIN NO. 18 I-90 Tunnel Lighting Systems	LtgDevRptV5b.pdf	HNTB		This Design Deviation is completed and in currently going through the approval process.				
DESING FOR TUNNEL SAFETY I-90 TUNNELS - SEATTLE, WASHINGTON	Phil Paper on I-90 Ventilation.pdf	Philip E. Egilsrud & Gary W. Kile, Sverdrup Cororation						
	references.zip			This zip file has the reference documentation that has been used for the project.				
I-90 TUNNEL & LIDS INCIDENT RESPONSE MANUAL	Simplex-TCCS IRM I90 Transit Project.do	WSDOT						